

# Trickle-Down

## Business Intelligence

BI data and analysis are escaping their silos to deliver value to users across the enterprise, from big thinkers to telemarketers

BI IS SHEDDING ITS STAID REPUTATION AS A REPORT-GENERATING tool for an elite squadron of executives and financial managers. Although no one is forsaking the value of those reports for evaluating business goals and forecasting growth, data culled using big BI apps from vendors such as Business Objects, Cognos, and Hyperion — along with mini-BI applications embedded in other enterprise systems, including ERP and CRM — are bringing BI to the masses, from line-of-business managers to call-center or support-desk workers.

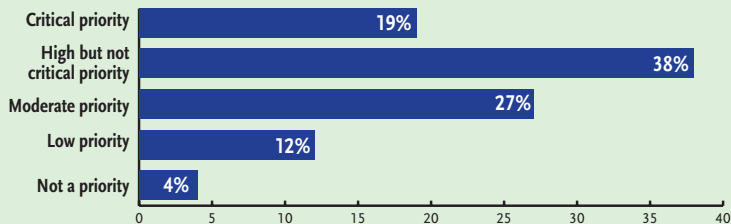
BY RICHARD GINCEL

Results from the *InfoWorld* Business Intelligence Report 2005 bear this out: During the next year, 70 percent of respondents plan to increase the number of employees who have access to BI solutions.

Rather than BI being used as a separate, disconnected mechanism for analysis — the ultimate example being CPM (corporate performance management) systems ([infoworld.com/2228](http://infoworld.com/2228)) — BI applications integrated with other apps are delivering the capability to display and interact with BI data in its native form, in real time. A call-center upsell application with an embedded BI app, for example, can predict which of a handful of products would be best-suited for a particular customer based on that customer's recent transactions and credit history, as well as on the company's inventory.

Bill Gassman, principal analyst at Gartner, observes, "BI is showing up at deeper levels of the organization. It's a shift toward directed BI, where you're guiding

## As an IT priority for the next 12 months, where is business intelligence on your company's radar screen?



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people through decisions." The *InfoWorld* Business Intelligence Report reveals that 45 percent of companies surveyed now use BI solutions to guide employees through decision-making processes.

Our survey, administered via the Internet between Feb. 24 and March 9, also revealed that 32 percent of respondents think that the most important feature of their companies' BI solution is prepackaged integration with existing enterprise applications. Analysts expect those numbers to grow.

Alaska Airlines is forging ahead toward its goal of getting "business intelligence down to the customer-facing level" by using Siebel Business Analytics, says James Archuleta, director of CRM at Alaska Airlines. The challenge is controlling the flow. "We're still working on the metadata layer to define what all the business rules are because we don't want ad hoc BI gone crazy," he says.

The trickling down of BI is reflected in several terms. Noted expert Keith Gile, principal analyst at Forrester Research, calls it operational BI: analytic functionality built into the procedural interface of an enterprise application — the screens and applications used by sales personnel,

for example — that makes or recommends decisions for end-users, thereby shrinking operational response time to minutes or seconds.

"We are witnessing a shift away from merely seeing BI as tactical or strategic" at high levels in the organization, Gile says. In some instances, BI apps are embedded to add value to the existing enterprise apps; in other instances, data from BI apps is "surfaced as a meaningful component of the enterprise app," he says.

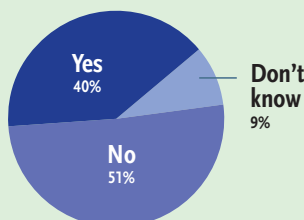
By any name, BI's expanding role is changing work cultures across the enterprise by delivering timely information to frontline workers, typically through customized dashboards, industry observers say (see "Customized Dashboards Deliver," page 50).

### Keeping Up With the Times

The proliferation of operational BI is getting a boost from a rising demand for sophisticated composite applications. Vendors such as Actuate, Cognos, and IBM are focusing efforts on delivering BI services and components to allow them to embed their core technologies within external apps from the likes of Oracle, SAP, and Siebel.

Siebel Business Analytics is one plat-

## Do the querying and reporting capabilities of your company's business intelligence solution take full advantage of packaged applications and data systems across your enterprise?



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— Bill Gassman, Gartner

form that leverages operational BI. “We have Web services interfaces so you can take any analytical result from Siebel Analytics and inject it into a Java application or .Net application, and so on. That lets us display analytical results in another application,” says Paul Rodwick, vice president of marketing for Siebel Business Analytics at Siebel. But aside from that, the secret to success is “rich, deep integration of analytics into [CRM apps] to direct workflow and get more real-time information flowing,” he says.

Application developers are relying on EII (enterprise information integration) software, which provides an abstraction layer over information assets that allows for a single, composite view of data derived from disparate sources. EII technology allows for virtual joining of data from disparate, unrelated sources for the purpose of surfacing information directly from enterprise apps or non-data-warehousing sources.

For example, a BI tool such as Cognos ReportNet uses Composite Software’s Composite Information Server, which allows ReportNet to extract information from data repositories spread across an organization and compile it into a single report.

But it’s important not to play fast and loose with the word “report” when discussing operational BI. Until recently, “BI” and “report” have been joined at the hip. But not everyone needs pages and pages of analysis. “You don’t want to give reports to a call-center person,” Rodwick says. “You want to give them a nugget of information that changes what their screen tells them to do.”

And that information “has to be so simple, my mother can use it,” Forrester’s Gile quips. “Because who do we have in the call centers? Generally, they aren’t trained in BI, nor should they have to be.”

Rodwick suggests that operational BI turns the venerable software category on its head. “Most traditional BI solutions are about driving masses of reports to people who have to go through them, figure out what interests them, and then decide what action to take,” he says. “The major trend for BI [applications] is to drive select information to individuals when they need it, be sure that it’s already relevant to what they have to accomplish, and then guide them toward what action to take.”

## IT Rolls Up Its Sleeves

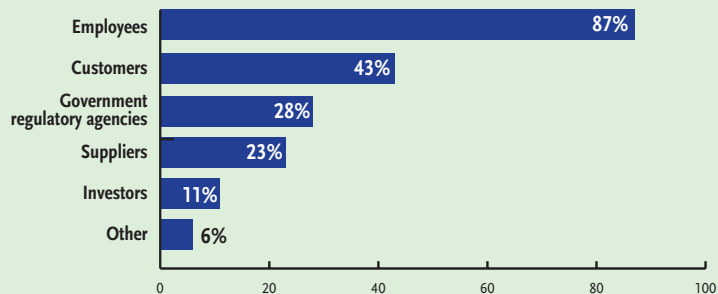
For IT, operational BI requires an exhaustive understanding of the requirements of workers in addition to myriad business processes. “It all goes wrong if IT makes the wrong decisions about what to provide users,” says Michael Corcoran, vice president and chief communications officer at Information Builders. His company recently unveiled WebFocus 7, a product designed to push BI to the operational level and to tailor it accordingly.

“We’re no longer talking about

power users, so when IT pulls together its test group, it has to be absolutely sure [the members] represent the needs and skill level” of users in the real world, Corcoran says. Software to serve this diverse group also needs to be capable of pulling in data from across the enterprise. WebFocus 7 provides native access to more than 200 data sources and data formats, including relational and legacy data. WebFocus 7, which is scheduled to ship on April 25, strengthens ties with connectivity software from Information Builders subsidiary iWay Software, a vendor of application adapters.

Gartner’s Gassman urges IT to pay careful attention to how data from disparate systems is captured and integrated. “This is one of the inhibitors” of embedded BI, he says. “If you say, ‘I’m going to buy an analytic application from XYZ Company and use it to pull data together from Siebel and SAP to make wonderful decisions,’ immediately you end up with a data-quality issue. If you just throw data from operational systems together and the data’s not accurate, you’ll start to

## Your company’s business intelligence solution currently provides information to:



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# “With all this accessible data comes a tremendous amount of clarity.”

— Rich Clayton, Hyperion

run into trouble when people make decisions based on Canadian dollars instead of U.S. dollars.”

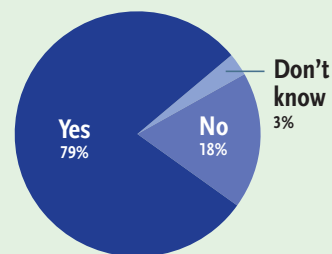
In a recent report on best practices for developing BI applications for broad use, Forrester’s Gile says IT should approach rollouts by separating technical functionality — such as OLAP, visualization, or predictive analytics — from a BI application’s roster of functional requirements — such as customer segmentation, supply-chain optimization, or forecasting.

This simplifies the process of targeting the appropriate organizational layer. Where employees are characterized by minimal training and maximal turnover, the report continues, analytic functionality built into the procedural UI goes a long way in

assisting operations such as customer service, shipping, and manufacturing. It also reflects a gradual shift toward putting relevant data into the hands of more workers.

That evolution may be gradual, but the cumulative effect on BI and its expanded range of users is dramatic. “It’s changing whole cultures, but I think it’s a positive change,” says Rich Clayton, vice president of product marketing at Hyperion, a BI platform vendor and BPM software provider. “With all this accessible data comes a tremendous amount of clarity. When a salesperson knows that the manager can look at day sales outstanding, down to the minute, a whole different mind-set develops. That kind of visibility is a powerful development.”

## Do your company’s business intelligence solutions employ intuitive, graphical interfaces?



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## Customized Dashboards Deliver

THE DASHBOARD CRAZE SWEEPING ENTERPRISES SHOWS NO sign of abating. On the contrary, dashboards are being tuned to better deliver real-time information to a wider array of workers and to ensure that the information is pertinent to individual business roles.

“They’re not just for executives anymore; they’re for everyone,” says Jeff Jones, program manager of data management marketing at IBM. “They’re a hot commodity because they provide the window into the information environment that you need.”

As if to make good on Jones’ point, Hyperion, a BI platform vendor, has introduced a drag-and-drop, wizard-driven dashboard-development component to its Hyperion Performance Suite 8.3, which allows business users with no programming skills to customize dashboards on the fly. “What would have taken half a day using Java, or a day’s coding, has gotten a lot easier,” says Colin Dover, senior product marketing manager at Hyperion. “So what you’re really talking about — what this enables — is pervasive delivery.”

AmberPoint, maker of SOA management software, unveiled in March enhanced and fully customizable dashboard capabilities for its suite of products.

“SOA systems are more complex, evolve more rapidly, and comprise heterogeneous environments, so by their nature they’re more difficult to manage,” says Bob Dever, director of marketing communications at AmberPoint. “The dashboards we provide simplify the ability to monitor and take corrective actions.”

Adaptability is key. “We can customize the dashboards to suit the specific needs of our users,” says Toby Redshaw, vice president of IT strategy at Motorola, an AmberPoint customer.

According to the *InfoWorld Business Intelligence Report 2005*, customer demand for dynamic dashboards is alive and well. When asked about the functionality of their BI solutions, 78 percent of respondents said they have the ability to share dashboard views with colleagues. On the downside, 20 percent said their dashboards don’t allow for sufficient drilldown.

That statistic keeps vendors striving to increase functionality and to widen the dashboard’s appeal. “The use of BI on the front lines has been sought after for many years,” says Rich Clayton, vice president of product marketing at Hyperion. “The ability to leverage them to arrive at actionable strategies fundamentally improves the way companies do business.”

— R.G.

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## 1 WHAT IS YOUR ORGANIZATION'S PRIMARY BUSINESS ACTIVITY AT THIS LOCATION? (PLEASE CHECK ONE ONLY):

### General Business Industries

- 01. Defense Contractor / Aerospace
- 02. Retail
- 03. Wholesale / Distribution (non-computer)
- 04. Pharmaceutical / Medical / Dental / Healthcare
- 05. Financial Services / Banking
- 06. Insurance / Real Estate / Legal
- 07. Transportation / Utilities
- 08. Media (print / electronic)
- 09. Communication Carriers (telecomm, data comm., TV / cable)
- 10. Construction / Architecture / Engineering
- 11. Manufacturing & Process Industries (other than computer-related)
- 12. Research / Development

### Technology Providers

- 13. Managed Service Provider / Business Service Provider
- 14. Technology Service Provider (ISP / ASP / MSP, etc.)
- 15. Computer / Network Consultant
- 16. Systems or Network Integrator
- 17. VAR / VAD
- 18. Technology Manufacturer (hardware, software, peripherals, etc.)
- 19. Technology - Related Retailer / Wholesaler / Distributor

### Government / Education

- 20. Government: federal (including military)
- 21. Government: state or local
- 22. Education
- 98. Other \_\_\_\_\_  
(Please specify)

## 2 WHAT IS YOUR PRIMARY JOB TITLE? (PLEASE CHECK ONLY ONE):

### IT / Technology Professionals

- 01. Chief Technology Officer (CTO)
- 02. Chief Information Officer (CIO)
- 03. Chief Security Officer (CSO)
- 04. Vice President (including SVP, EVP, etc.)
- 05. Director
- 06. Manager / Supervisor
- 07. Engineer
- 08. Systems Analyst / Programmer / Architect
- 09. Consultant / Integrator
- 10. Developer
- 11. IT Staff
- 12. Other IT Professional \_\_\_\_\_  
(Please specify)

### Corporate / Business Management

- 13. CEO, COO, President, Owner
- 14. CFO, Controller, Treasurer
- 15. Vice President (including SVP, EVP, etc.)
- 16. Director
- 17. Manager / Supervisor
- 18. Other Business Management Title \_\_\_\_\_  
(Please specify)

- 98. Other Title \_\_\_\_\_  
(Please specify)

## 3 PLEASE INDICATE YOUR JOB FUNCTION(S)? (PLEASE CHECK ALL THAT APPLY):

### IT / Technology Functions

- 01. Executive
- 02. Department Management - IT
- 03. Research and Development Management
- 04. Systems / Network Management
- 05. Management of Enterprise Applications (CRM, ERP, SCM, etc.)
- 06. Applications Development
- 07. Consultant / Integrator
- 08. Other IT Department Management \_\_\_\_\_  
(Please describe)
- 09. Other IT - Staff \_\_\_\_\_  
(Please describe)

### Corporate / Business Functions

- 10. Executive
- 11. Department Management - Business
- 12. Financial / Accounting Management
- 13. Research and Development Management
- 14. Sales / Marketing Management
- 15. Other Department Management
- 16. Other Department Staff \_\_\_\_\_  
(Please describe)
- 98. Other \_\_\_\_\_  
(Please describe)

## 4 HOW MANY PEOPLE ARE EMPLOYED AT THIS ORGANIZATION, INCLUDING ALL OF ITS BRANCHES, DIVISIONS AND SUBSIDIARIES? (PLEASE CHECK ONE ONLY):

- 01. 20,000 or more
- 02. 10,000 - 19,999
- 03. 5,000 - 9,999
- 04. 1,000 - 4,999
- 05. 500 - 999
- 06. 100 - 499
- 07. 50 - 99
- 08. Less than 49

## 5 OVER THE COURSE OF ONE YEAR, DO YOU BUY, SPECIFY, RECOMMEND, OR APPROVE THE PURCHASE OF THE FOLLOWING PRODUCTS OR SERVICES WORTH:

\* CONSULTANTS: PLEASE INCLUDE WHAT YOU RECOMMEND FOR YOUR CLIENTS AS WELL AS WHAT YOU BUY FOR YOUR OWN BUSINESS, IF APPLICABLE. IF YOU CANNOT DISTINGUISH BETWEEN THIS AND OTHER LOCATIONS, PUT RESPONSE IN THE FIRST COLUMN.

- |                                  |                                |                            |
|----------------------------------|--------------------------------|----------------------------|
| 01. \$100 million or more        | 06. \$5,000,000 to \$9,999,999 | 11. \$100,000 to \$399,999 |
| 02. \$50,000,000 to \$99,999,999 | 07. \$2,500,000 to \$4,999,999 | 12. \$50,000 to \$99,999   |
| 03. \$30,000,000 to \$49,999,999 | 08. \$1,000,000 to \$2,499,999 | 13. Less than \$49,999     |
| 04. \$20,000,000 to \$29,999,999 | 09. \$600,000 to \$999,999     | 14. None                   |
| 05. \$10,000,000 to \$19,999,999 | 10. \$400,000 to \$599,999     |                            |

Product category	For this location: (write code in box)	For other locations: (write code in box)
Large systems	<input type="text"/>	<input type="text"/>
Client computers	<input type="text"/>	<input type="text"/>
Networking / Telecom (including servers)	<input type="text"/>	<input type="text"/>
Internet / Intranet / Extranet	<input type="text"/>	<input type="text"/>
Security	<input type="text"/>	<input type="text"/>
Storage	<input type="text"/>	<input type="text"/>
Peripheral equipment	<input type="text"/>	<input type="text"/>
Software	<input type="text"/>	<input type="text"/>
Service / Support	<input type="text"/>	<input type="text"/>

Please answer the questions on the following page. 

**6 PLEASE TELL US YOUR INVOLVEMENT WITH YOUR COMPANY'S STRATEGIC TECHNOLOGY INITIATIVES (PLEASE CHECK ALL THAT APPLY):**

- 01. Integrate Technology with company goals
- 02. Define Architecture
- 03. Choose Technology Platforms
- 04. Develop Technology Integration Strategy
- 05. Test, pilot, implement emerging technologies
- 06. Scalability Planning
- 07. Build, Run Web Services
- 08. Internet / Network Infrastructure
- 09. Customer Relationship Management
- 10. External Partnership Management
- 11. Budgeting
- 12. Recruitment & Retention
- 13. Other \_\_\_\_\_ (Please describe)
- 99. None of the above

**9 ARE YOU INVOLVED IN BUYING, SPECIFYING, RECOMMENDING OR APPROVING THE FOLLOWING TECHNOLOGY SERVICES? (PLEASE CHECK ALL THAT APPLY):**

- 01. Technology Services
- 02. Systems / Application Integration
- 03. E-Business / Internet / Intranet / Extranet
- 04. Application Development
- 05. Application Hosting (ASP)
- 06. Web Hosting
- 07. Web Development
- 08. Security
- 09. Storage
- 10. Content Delivery Networks
- 11. Disaster Recovery / Business Continuity
- 12. Outsourcing
- 13. Utility Computing Services
- 14. Telecommunications
- 15. Call Center / IT Services
- 16. Consulting
- 17. Other Technology Services

**7 ARE YOU INVOLVED IN BUYING, SPECIFYING, RECOMMENDING OR APPROVING THE FOLLOWING SOFTWARE? (PLEASE CHECK ALL THAT APPLY):**

- 01. Enterprise / E-Business Applications
  - 02. Customer Relationship Management (CRM / eCRM)
  - 03. Enterprise Resource Planning (ERP)
  - 04. Supply Chain / Procurement
  - 05. Business Process Management
  - 06. Business Intelligence / Data Mining
  - 07. Knowledge Management
  - 08. Portals
  - 09. Collaborative Applications / Groupware
  - 10. Project Management
  - 11. Financial / Payroll / Billing
  - 12. E-business / E-commerce
  - 13. Database Management Systems (DBMS)
  - 14. Data Warehouse
  - 15. Manufacturing
  - 16. Asset Management / Software Distribution
  - 17. Performance / Application Management
  - 18. Streaming Media
  - 19. Other Enterprise / E-Business Applications
- 20. Integration Software
  - 21. Web Services
  - 22. Web Services Orchestration
  - 23. Application Servers
  - 24. Enterprise Application Integration (EAI) / Middleware
  - 25. Business Process Management
  - 26. Legacy Application Integration Tools
  - 27. Other Integration Software
- 28. Application Development
  - 29. Application Development Tools
  - 30. Application Servers
  - 31. Web services
  - 32. Java / J2EE
  - 33. XML
  - 34. .NET
  - 35. Testing Tools
  - 36. Other Application Development Software

**10 ARE YOU INVOLVED IN BUYING, SPECIFYING, RECOMMENDING OR APPROVING THE FOLLOWING PRODUCTS OR TECHNOLOGIES? (PLEASE CHECK ALL THAT APPLY):**

- 01. Networking
  - 02. LANs (Local Area Networks)
  - 03. WANs (Wide Area Networks)
  - 04. Switches / Routers / Hubs
  - 05. Caching / Load Balancing
  - 06. Grid / Utility Computing
  - 07. E-mail
  - 08. Instant Messaging / Peer-to-Peer
  - 09. Content Delivery Networks
  - 10. Network and Systems Management
  - 11. Traffic Monitoring and Analysis
  - 12. QoS (Quality of Service)
  - 13. VoIP (Voice over IP)
  - 14. Telecommunications
  - 15. IP Telephony
  - 16. Wireless
  - 17. Remote Access
  - 18. Web / Video Conferencing
  - 19. Other Networking
- 20. Storage
  - 21. High-end / Enterprise Class Storage
  - 22. Network Attached Storage (NAS)
  - 23. Storage Area Networks (SANs)
  - 24. Storage Management Software
  - 25. IP Storage
  - 26. Direct Attached Storage (DAS)
  - 27. Storage Blades
  - 28. Storage Backup (Tape, Disk, Optical, RAID)
  - 29. Removable / Portable Storage
  - 30. Disaster Recovery
  - 31. Other Storage
- 32. Security
  - 33. Anti-Virus / Content Filtering
  - 34. Firewall
  - 35. VPN (Virtual Private Network)
  - 36. Identity Management / Authentication
  - 37. Intrusion Detection
  - 38. Encryption
  - 39. Other Security
- 40. Internet / Intranet / Extranet
  - 41. Web Servers
  - 42. Web Development / Authoring Tools
  - 43. Web Performance Management / Monitoring Software
  - 44. Content Management / Document Management
  - 45. Content Delivery Networks
  - 46. Internet Software
  - 47. Other Internet / Intranet / Extranet

**8 ARE YOU INVOLVED IN BUYING, SPECIFYING, RECOMMENDING OR APPROVING THE FOLLOWING HARDWARE? (PLEASE CHECK ALL THAT APPLY):**

- 01. Hardware
  - 02. Mainframes
  - 03. NT / Windows 2000 / .NET Servers
  - 04. Unix Servers
  - 05. Linux Servers
  - 06. Blade Servers
  - 07. PCs / Workstations
  - 08. Notebooks / Laptops
  - 09. PDAs / Handhelds / Pocket PC / Wireless Devices
  - 10. Other Hardware
- 11. Peripherals
  - 12. Laser Printers
  - 13. Inkjet Printers
  - 14. Monitors
  - 15. Flat Panel Displays
  - 16. UPS (Uninterruptible Power Supply)
  - 17. Network Copiers
  - 18. Other Peripherals

**11 WHICH OF THE FOLLOWING OPERATING SYSTEMS ARE IN USE OR PLANNED FOR USE AT THIS LOCATION? (PLEASE CHECK ALL THAT APPLY):**

- 01. Windows XP
- 02. Windows 2000
- 03. Windows NT
- 04. Windows 95/98
- 05. Windows CE
- 06. Mac OS (Macintosh)
- 07. Solaris
- 08. UNIX
- 09. Linux
- 10. MVS, VMS, ESA
- 11. VM
- 12. OS 400
- 13. Netware
- 14. Palm OS
- 15. Other OS

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